



ENDANGERED SPECIES TECHNICAL BULLETIN

Department of the Interior • U.S. Fish and Wildlife Service • Endangered Species Program, Washington, D.C. 20240



National Zoological Park photo

Threatened Status Sought for African Elephant to Curb Slaughter for Ivory

New evidence that ivory poachers are decimating herds of African elephants (*Loxodonta africana*) has prompted the Service to propose the species for Threatened status (F.R. 1/16/78).

The proposal sets forth several options for controlling the import of ivory products into the United States to help reduce illegal slaughter of the great beasts. Elephants once roamed the entire continent but are now confined to a few remnant patches of habitat.

Threatened status for the elephant was sought last August by the Fund for Animals in a petition to the Service. But the information submitted at that time was deemed insufficient for action.

The current proposal is based in part on data provided by Dr. Iain Douglas-Hamilton who has been surveying the elephant's status for nearly two years in a three-year study sponsored by the

International Union for the Conservation of Nature and Natural Resources (IUCN). The study is supported by the World Wildlife Fund and the New York Zoological Society.

Of the 34 nations where current information is available, the survey to date shows the elephant has recently become extinct in four countries (Gambia, Guinea-Bissau, Lesotho, and Swaziland) and is declining sharply in 18 other countries. Two countries have both declines and increases in different areas; four countries have stable populations, and only one—Somalia—has an increasing population. Trends have not been determined in the five remaining nations.

Ivory Kill Estimates

On the basis of African ivory exports to Hong Kong and other countries
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Section 7

Final Rules Set For Interagency Consultation

The U.S. Fish and Wildlife Service and National Marine Fisheries Service (NMFS) have issued a joint final rule-making (F.R. 1/4/78) that sets forth the consultation process to assist Federal agencies in complying with section 7 of the Endangered Species Act of 1973.

Section 7 prohibits Federal agencies from authorizing, funding, or carrying out any action that may jeopardize the continued existence of listed species or destroy or modify their Critical Habitats. The rulemaking, which took effect upon publication, differs in several important respects from the procedures proposed by the Service on January 28, 1977 (see February 1977 BULLETIN).

Consultation Mandatory

One of the major changes is that consultation with either the Service or NMFS is now mandatory if a Federal agency finds that its activities or programs may affect a listed species in any way. However, the regulations also provide flexibility to permit most Federal actions to be carried out without jeopardizing the continued existence of Endangered or Threatened plants and animals.

In the proposed procedures, initiation of consultation was discretionary on the part of the affected agency. The decision to require consultation was taken to promote conformance with recent Federal court decisions setting forth the policy that consultation is requisite to administration of the law by the Secretaries of Interior and Commerce. After such consultation, it is the responsibility of the involved agency (or agencies) to decide whether or not
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Regional Briefs

The annual migration southward of several species of Endangered birds is one of the many events that has occupied the attention of Endangered Species Program regional staffers in recent weeks. Following is a region-by-region summary of recent activities:

Region 1. Approximately 1,600 Aleutian Canada geese were counted in mid-November moving down the Sacramento river valley in northern California. This is a peak reported number since rebuilding of the population began several years ago. Many of the geese winter at the Salton Sea National Wild Refuge in southern California.

The regional office is sponsoring a workshop February 23-25 at Reno, Nevada, to coordinate Federal, State, and private organization efforts in the compilation of data on the status of Endangered and Threatened plants. For further information, contact Dr. Duane Atwood at the Region 1 office (503) 231-6118.

Region 2. A final count as of January 1, 1978, shows 71 whooping cranes have arrived at the Aransas National Wildlife Refuge in Texas from Canada's Wood Buffalo National Park. The size of the flock, which includes nine young birds, indicates a net gain of two birds since the whoopers left Aransas last spring. (Seven whoopers

were lost during the year, including some on the southern migration.) Eight of the nine young wore red leg bands affixed by the Canadian Wildlife Service to assist continuing cooperative studies on this extremely rare species.

Region 3. Biologists are attempting to determine through feather analysis with X-ray defraction and electron scanning microscopes whether subpopulations of the Kirtland's warbler are being established. One preliminary indication that this may be occurring has come from a study of a warbler that was live-trapped last year in Ontario, Canada. If subpopulations are identified, it may help account for the loss of warblers in the Bahamas, and possibly Mexico, in the wintering months. The project involves researchers at Ohio State University, the State of Michigan Fish and Wildlife Department, members of the Kirtland's Warbler Recovery Team, and the Service's regional staff.

Region 4. A second pair of red wolves was successfully released January 5 on Bulls Island in the Cape Romain National Wildlife Refuge near Charleston, South Carolina, as part of a translocation experiment. The male and female, which had been in a captive breeding group at the Point Defiance Zoo, Tacoma, Washington, were trapped earlier in Texas. The project is being conducted by the Service in co-



U.S. Fish and Wildlife Service photo
Texas red wolf

operation with the South Carolina Wildlife and Marine Resources Department.

In the first translocation experiment, which began in December 1976, the pair of red wolves swam away from the island after being released. The male later returned and remained until last July, when he was taken back to Tacoma. The female was recaptured on the mainland after crossing the Intra-coastal Waterway. She died of an infection last April.

Region 5. A 413-acre tract of land on Cape May, New Jersey, is being evaluated for possible acquisition with State Endangered species grant-in-aid funds. The area is used extensively by the American peregrine falcons being re-established in New Jersey when they migrate in the spring and fall, and by numerous other raptors, including the southern bald eagle, osprey, and Cooper's hawk. If approved, this would be the first Endangered species land acquisition in region 5.

Region 6. A two-day implementation workshop on the recovery plan for the Rocky Mountain-Southwest population of the American peregrine falcon (see December 1977 BULLETIN) has been scheduled for January 24 at Denver. About 50 representatives of the 13 States involved in the plan and affected Federal agencies are expected to attend the session sponsored by the Service's regional office.

The regional office also will be conducting a whooping crane site evaluation workshop February 23 at Pierre, South Dakota. The session will involve discussion of standardized methods for reporting whooper sightings and the birds' use of habitat on their annual 2,600-mile round trip migration between Texas and Canada. For further information, contact Maurice Anderson at the Service's Pierre Area Office (telephone: 605-224-8692).

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Timetable Fixed For Federal Critical Habitat Survey

A timetable for expediting a survey of all Federal lands for Endangered species Critical Habitat has been developed by the Service in accordance with a Presidential directive.

The plan, which calls for completing the survey by January 1, 1980, places the highest priority on identifying the habitat of species currently facing the greatest threats.

Under the directive issued by President Carter last May 23, Federal land-managing agencies were told to identify, to the extent feasible and "within the shortest possible time," those lands under their control which "appear to you" to be Critical Habitat. Surveys were to be made in consultation with the Secretaries of the Interior and Commerce, with recommendations for Critical Habitat determinations to be forwarded to the Secretaries, who hold final authority for making such determinations. (See June 1977 BULLETIN.)

Priority Categories

The requested schedule for obtaining the information was presented to representatives of Federal land-managing agencies at a workshop conducted on December 9 by the Service's Endangered Species Program, which coordinates the project jointly with the National Marine Fisheries Service. Species were listed under the following categories and timetables:

Priority 1: Recommendations due by January 1, 1979. This category includes species generally facing high threats that substantially jeopardize their continued existence. These include the American peregrine falcon, Puerto Rican parrot, the Hawaiian crow and thirteen other birds, four fishes, three sea turtles, three whales, one seal, twelve freshwater mussels, the jaguarundi, ocelot, and three San Clemente Island plants.

Priority 1A: Critical Habitat determination not feasible at this time because of species' extreme rarity.

Priority 2: Recommendations due by July 1, 1979. Generally, the species in this category are facing medium threats, and recovery efforts could be deferred temporarily without resulting in extinction of the species. This category includes a number of Hawaiian birds, the Arctic peregrine falcon, the Ponape Mountain starling, the salt marsh harvest mouse, the Northern Rocky Mountain wolf, the Sonoran pronghorn, ten fishes, the San Francisco garter snake, three amphibians, six mussels, and one plant.

Priority 3: Recommendations due by

State ES Aid Authorized; Qualifications Eased

President Carter has signed a bill (P.L. 95-212) authorizing \$16 million for the State Endangered species grant-in-aid program, under the terms of the Endangered Species Act of 1973, through fiscal year 1981.

The authorization is \$6 million higher than the original four-year authorization for section 6 of the act, so as to allow for an expansion of the program. Currently, with the addition of Tennessee on December 23, a total of 21 States have signed cooperative agreements with the U.S. Fish and Wildlife Service, making them eligible for Federal grants to assist in carrying out conservation efforts for resident Endangered or Threatened species of fish and wildlife.

The measure, approved by a House-Senate conference committee on November 29, contains a House amendment (H.R. 6405) to facilitate the qualification of States for financial aid under section 6. In

its original form, section 6 specified that, to enter into a cooperative agreement, a State fish and wildlife agency must have the authority and programs to conserve all resident fish and wildlife species which have been listed as Endangered or Threatened by the Secretary of the Interior. Many State agencies lack such broad authority, which often must empower them to manage listed invertebrates as well as vertebrate species.

Language has been included in the new amendment to allow a State to qualify for grant-in-aid funds if it satisfies all other requirements set forth for entering into a cooperative agreement and if the State has submitted plans that indicate it will devote immediate attention to State-listed or Federally listed species that both the State and the Secretary agree are most urgently in need of conservation programs.

January 1, 1980. Many of the species in this category are listed as Threatened and are facing low threats (compared to the species in the other categories). They include such species as the San Joaquin kit fox, alligator, Aleutian Canada goose, and the Comanche Springs pupfish.

"Catch-up" Operation

Keith M. Schreiner, manager of the Endangered Species Program, told the workshop he hoped the surveys would be carried out with the assistance of State, local government, and private experts to get "the best biological facts available." Locating new funds for the work, though, is to be the individual responsibility of each agency involved.

In response to a question raised by a workshop attendee, Schreiner said the surveys were intended to be a "one-time, catch-up operation" for the agencies. In the future, he said, he anticipates that Critical Habitat data will be included at the time species are listed or proposed for listing.

Once agencies have identified any area as a potential Critical Habitat, the President's directive instructs them to exercise caution in making any modifications until the final determination has been made.

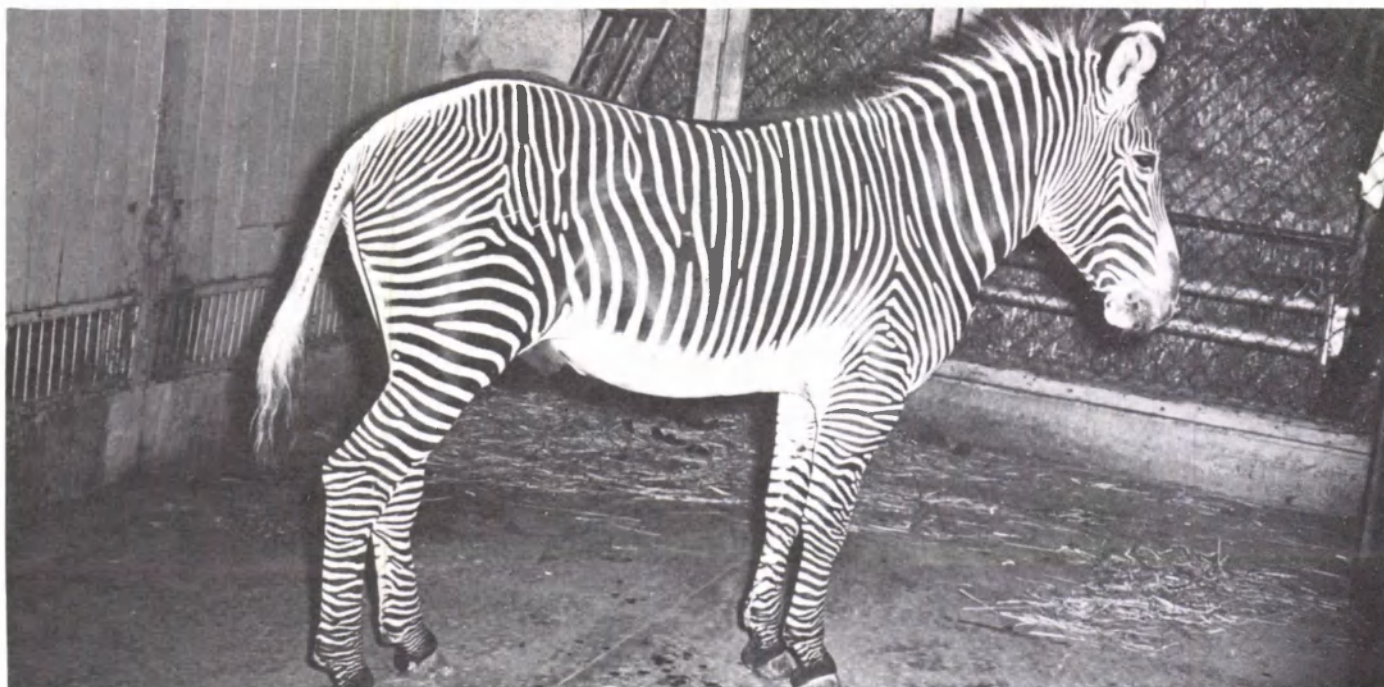
Publications Available

In their 444-page book entitled *Endangered and Threatened Plants and Animals of North Carolina*, J. E. Cooper, S. S. Robinson, and J. B. Funderburg present arguments for strengthening North Carolina's protection of Endangered species. The book is available for \$8.00 (checks should be made payable to "NCDA—Museum Extension Fund") from the North Carolina State Museum of Natural History, P.O. Box 27647, Raleigh, North Carolina 27611, Attention: Dawn Newkirk.

"Abstracts for Geographical Data Organization for Rare Plant Conservation," by the New York Botanical Garden, is available from the New York Botanical Garden, Publications Department, Bronx Park, New York 10458.

"The Rare Vascular Plants of Ontario," by George W. Argus and David J. White, can be obtained by sending a written request to the National Museum of Natural Sciences Library—Syllogeus Series No. 14, Ottawa, K1A 0M8, Canada.

RULEMAKING ACTIONS – DECEMBER 1977



National Zoological Park photo

Endangered status has been proposed for Grevy's zebra to curtail imports of its distinctive hide into the United States. Population

of the species has been reduced from 10,000 to 1,500 in Kenya by uncontrolled killing for collectors paying up to \$2,000 per hide.

Two Zebras

Grevy's zebra (*Equus grevyi*) and Hartmann's mountain zebra (*Equus zebra hartmannae*)—both victims of uncontrolled killing—have been proposed by the Service for Endangered status (F.R. 12/23/77).

Highly valued for its distinctively striped hide, Grevy's zebra has been reduced from a population of 10,000 in Kenya in 1971 to about 1,500 today. The species is believed to have been rendered extinct in its former range in Somalia and drastically reduced in Ethiopia. Poachers are estimated to have taken 8,000 in the past three years for export of hides to collectors around the world. Because of the scarcity of hides from this zebra, retail

prices have soared from \$150 to \$2,000 per hide in New York City.

Although Kenya has recently banned hunting of the zebra, the high price for hides is expected to continue stimulating poaching. The proposed rule would prohibit importation of live specimens or parts or products of the animals into the United States, other than for scientific purposes or to enhance the survival or propagation of the species; consequently, it would eliminate the U.S. market for hides.

Livestock Competitor

Hartmann's mountain zebra once ranged along the coasts of Angola, Namibia (formerly South-West Africa), and into South Africa. Its total population was estimated at 50,000 to 75,000. In the past two decades, though, the

subspecies has been ruthlessly eliminated as a competitor for available food to cattle, sheep, and other livestock being raised by ranchers.

Currently, the population is estimated at 2,000 and is confined to Namibia. Because of political unrest in the area and the abundance of firearms, indiscriminate destruction of the subspecies is expected to continue. The Service believes there are no effective means to control the slaughter.

The Cape mountain zebra (*Equus zebra zebra*), the only other subspecies of mountain zebra, has been listed as Endangered in its South African habitat. The population of this zebra is estimated to be less than 200.

Comments on the proposal should be submitted to the Service no later than February 21, 1978.

Two Big-eared Bats

The Service has issued a proposed rulemaking to add the Virginia big-eared bat (*Plecotus townsendii virginianus*) and Ozark big-eared bat (*P.t. ingens*) to the Endangered list and to designate Critical Habitat for the Virginia big-eared bat (F.R. 12/2/77).

The Service has set the following deadlines for submittal of comments on this proposed ruling: January 31 for the public, and March 2 for the Governors of the six States in which the bats are known to occur.

Need for Protection

Both bats have suffered a serious

decline in numbers in recent years, principally as a result of human disturbance. The bats have long been dependent for hibernation and reproductive purposes on certain caves that also have become increasingly popular with spelunkers and other people. Unfortunately, the bats are highly intolerant of human presence and quickly abandon their roosts when disturbed.

It is known that some bats have been deliberately killed, but the chief threat and cause of subspecies decline is human visitation. Even scientific or educational observation of the bats may have an adverse effect on them.

Efforts to shield the bats from visitors have not been successful. One

cave in the Monongahela National Forest, for example, was closed off by Forest Service personnel and declared off-limits by the National Speleological Society; nevertheless, intruders broke into the cave and subsequently a number of bats were found dead.

Virginia Big-eared Bat

The total population of the Virginia big-eared bat is now estimated at less than 4,000. Several hundred of them live in southwestern Virginia. Fewer than 500 occur in Kentucky, where there is now only one known nursery colony. The rest are found in eastern West Virginia, where at least five wintering colonies have disappeared since

the early 1960's and where there are now only three known nursery colonies.

Five caves in West Virginia (four in Pendleton County and one in Tucker County), together with a cave in Lee County, Kentucky, have been proposed as Critical Habitat for this subspecies. These caves contain the three nursery colonies that serve most of the subspecies' remaining members and the three principal wintering colonies.

Ozark Big-eared Bat

The total population of the Ozark big-eared bat is estimated to be less than 200. These surviving bats live in a few caves located in the upland areas of southwestern Missouri, northwestern Arkansas, and eastern Oklahoma.

Background

The Service's proposal had its origin in a petition submitted in October 1976 by John S. Hall and Michael J. Harvey, both professors of biology. They recommended Endangered status for both subspecies and also identified the six caves to be considered for Critical Habitat determination.

Data from these two scientists, together with additional information provided by other sources, served as the basis for the Service's decision to prepare and issue a proposal.

Socorro Isopod

Endangered status has been proposed by the Service for the Socorro isopod (*Exosphaeroma thermophilum*), a unique crustacean that, having lost its natural habitat, has managed to survive in an artificial environment (F.R. 12/30/77).

The Socorro isopod, according to the Service, "is of particular interest and importance in that it is one of only two fully freshwater isopods in the family *Sphaeromidae*. The problem of how this species arrived at its present state of evolutionary adaptation is of concern to isopod specialists, and the



Socorro isopod has a head nearly three times as broad as it is long

concept of land-locked fauna is of concern to biologists as a whole."

The species is known only from the Socorro thermal area, which extends for more than 2 miles along the base of the Socorro Mountains in central New Mexico. Within this area are three springs, all of which have been capped off, with their water being piped primarily to the city of Socorro.

Modification of the springs destroyed the natural habitat of the Socorro isopod. However, some of the isopods apparently made their way into the partially open conduit system of an abandoned bathhouse. Consequently, the species' present habitat consists of two small pools and less than 90 feet of iron pipe, all of which are located on privately owned land.

The conduit system receives water from Sedillo Spring, only a few hundred feet distant, and so it is assumed that the isopod population had its origin in that spring; it remains unknown as to whether or not isopods also lived in the other two springs.

In 1976, Michael Hatch of the New Mexico Department of Game and Fish estimated that the Socorro isopod population totaled about 2,400; this was corroborated by a second count in 1977, indicating that the population is relatively stable.

Nevertheless, the species is living in a highly restricted and fragile environment, where it is threatened by reduced water flow in times of drought (as occurred during the summer of 1977) and by the periodic cleaning and dredging of the conduit system.

Accordingly, the New Mexico Department of Game and Fish recommended Endangered listing for the species and provided appropriate supporting data. The Service believes that Endangered classification will provide the Socorro isopod with needed protection in its present habitat and could possibly lead to reestablishment of the species elsewhere.



University of Michigan Museum of Zoology photos

Endangered status has been proposed for the Waccamaw killifish (top), Waccamaw darter (middle) and Waccamaw silverside. All specimens shown are adult males.

Five Small Fishes in North Carolina, Tennessee, Arkansas

To help provide protection for five small fishes found only in limited areas of North Carolina, Tennessee, and Arkansas, the Service has issued a proposed rulemaking to add the five species to the Endangered list and to designate their ranges as Critical Habitat (F.R. 12/30/77).

The fishes are the Waccamaw darter (*Etheostoma perlongum*), Waccamaw killifish (*Fundulus waccamensis*), and Waccamaw silverside (*Menidia extensa*), in North Carolina; the Barrens topminnow (*Fundulus* sp.), in Tennessee; and the Ouachita madtom (*Noturus lachneri*), in Arkansas.

Comments from the public on this proposal should be submitted no later than February 28; comments from the Governors of the three States are due by March 30.

North Carolina Fishes

The Waccamaw darter and Waccamaw silverside are known only from Lake Waccamaw, which is a clear, shallow, sand-bottomed freshwater lake on the Coastal Plain in southeastern North Carolina. The Waccamaw killifish is found in Lake Waccamaw and also in Phelps Lake, a similar body of water located in the eastern part of the State.

The principal threat to the three fishes, which are already on the State's preliminary list of endangered species, is deteriorating water quality resulting from increased human activity along the lake shores.

Around Lake Waccamaw, garden fertilizer runoff, domestic waste seepage (the area lacks a modern sewage system), and drainage canal excavation for real estate development contribute to increasing eutrophication. The use of herbicides for vegetation control in canals flowing into the lake

(continued on next page)

Provisions Set For interagency Consultations With FWS

(continued from page.1)

to proceed with the proposed activity in light of its section 7 obligations.

One of the reasons for requiring consultation—even if the anticipated result will foster conservation of a listed species—is to avoid duplication of conservation efforts among Federal agencies. For example, Service officials noted that, in the absence of such consultation in the past, the U.S. Forest Service, Park Service, and Fish and Wildlife Service all set up similar programs for Hawaii's Endangered birds.

Under the new regulations, when Fish and Wildlife Service officials receive a request for consultation from another Federal agency, it is required that they evaluate an activity's impact within 60 days. At that time, the Service can determine that the activity will have no impact on listed species, that it will actually benefit the species, or that it is likely to have a harmful effect. The Service can also request that further studies be undertaken in order for it to render its final biological opinion.

After receipt of this additional information, the Service must respond within 60 days.

The final rulemaking recognizes that general consultation procedures must be sufficiently flexible to accommodate the myriad activities that are authorized, funded, or carried out by the Federal Government.

Counterpart Regulations

Accordingly, a new section has been written into the procedures providing for the drafting of joint counterpart regulations by Federal agencies, with assistance from the Service and the NMFS, that are tailored to the needs of individual agencies. Development of counterpart regulations may be necessary when the agency must respond or carry out its activities in a time period shorter than 60 days, for example.

The counterpart regulations also could allow for participation of non-Federal representatives in the consultation process. But the request for consultation would have to come from the Federal agency, which has ultimate

responsibility for section 7 compliance.

Other Provisions

The final rulemaking takes into account some of the many suggestions received on the proposed procedures. One provision allows consultation on a number of similar individual activities within a given geographical area or administrative unit. For example, a number of timber sales on Federal lands could be handled in one consultation instead of in separate ones.

In addition, if the Fish and Wildlife Service learns of a Federal activity or program being carried out that could affect a listed species or its habitat, the Service will request consultation. Until consultation has been completed, the Federal agency must not make a firm commitment of resources that would foreclose the consideration of other options to the planned activity.

A provision also has been included to reflect the applicability of the consultation process to activities of Federal agencies that may affect listed species overseas.

Fishes (continued from page 5)

also poses a threat to the lake's fishes, according to State specialists.

Barrens Topminnow

Found only in Coffee County in central Tennessee, the Barrens topminnow inhabits springs and spring-fed creeks in the headwaters of the Duck River and the west fork of Hickory Creek in the headwaters of the Collins River. Habitat alteration, principally from drainage activities and channeliza-

tion, has had an adverse effect on this species, which is currently listed as endangered by the State of Tennessee.

Ouachita Madtom

The Ouachita madtom is known only from the headwaters of the Saline River, a tributary of the Ouachita River. Within Garland and Saline Counties in central Arkansas, the species inhabits clear, gravel-bottomed streams that traditionally have been characterized by excellent water quality.

The continued existence of the species is threatened by proposed stream alteration and real estate development projects that could result in heavy siltation in the Saline's headwaters.

The Ouachita madtom was one of 29 fishes identified by the Service in a status review notice published in the *Federal Register* on March 18, 1975. Subsequently, the Governor of Arkansas recommended that this species be listed as Endangered—a recommendation that was also supported by a specialist from Arkansas who responded independently to the Service's notice.

Comment Period Extended On 4 Southeastern Fishes

The Service is extending the comment period by 60 days and will hold a public hearing on its proposal to list four small fishes found in Alabama and Georgia as Endangered and to designate their Critical Habitat.

The species involved in the proposal (F.R. 11/29/77) are the Cahaba shiner, spring pygmy sunfish, pygmy sculpin, and goldline darter. The darter occurs in both Alabama and Georgia; the other three fishes are known only in Alabama. Public comments originally were due by January 30, 1978. But because of widespread interest in the proposal, the Service decided to grant an extension and conduct a public hearing. The date of the hearing will be announced in the *Federal Register*.

BULLETIN 1976-77 Subject Index

A subject index of articles and rulemaking actions that have been published in the BULLETIN since the first issue (dated July 1976) and extending through the December 1977 issue is currently in preparation. The index will be mailed separately to subscribers and is expected to be available as a reference to others by the end of February.

Elephant (continued from page 1)

where tusks are carved into figurines and jewelry, Douglas-Hamilton estimates that 100,000 to 400,000 elephants were killed in 1976 for their ivory alone. (Hong Kong in 1976 imported 719 metric tons, which at 10 kilograms or 22 pounds per elephant—the average weight of a pair of tusks—represents about 72,000 elephants.)

The survey places the present minimum population at 1.3 million elephants throughout Africa. This suggests an annual kill rate of between 7.7 and 30.8 percent of the entire wild population just for ivory. These rates far exceed the 3 to 7 percent harvest rate generally applied to maintain stable elephant populations in parks and indicate that, if maintained, the elephant could become extinct in many countries in another 4 to 20 years.

Rising Ivory Prices

Douglas-Hamilton attributes the rise in poaching to a recent tenfold increase in ivory prices. In 1970, the price per kilogram was \$3. Currently, it is \$30 a kilogram and higher. A single adult elephant (both males and females bear tusks) thus represents a considerable amount of money to poachers in lands where wages and per capita income are extremely low.

Moreover, Douglas-Hamilton points out that the elephant is under severe pressure from other quarters. They are losing much of their range to Africa's human population explosion and are being compressed within a few protected islands of wilderness. Here, he says, elephants are sometimes destroying trees and shrubs faster than the plants can grow; in extreme cases, they starve. Kenya's Tsavo East National Park lost about 6,000 elephants in a 1970-71 drought and the habitat has not yet recovered.

Elephants eat up to 500 pounds of vegetation a day and, when it becomes scarce, will raid croplands. Douglas-Hamilton says many are being killed to protect crops and for meat in protein-deficient areas such as West Africa, but "killing for ivory is the major threat to elephants right now."

Weak Protection

The IUCN survey indicates that, while many African nations have laws and preserves for elephant protection, enforcement is weak. In Uganda, for example, annual aerial surveys of the two largest national parks show severe population declines and the presence of numerous carcasses suggests ivory poaching is a major cause.

The African elephant is listed in Appendix II of the Convention on International Trade in Endangered Species of

Wild Fauna and Flora. But most African nations where the elephant is present are not among the 40 nations party to the treaty, limiting the effectiveness of the Convention's protection.

Species listed under Appendix II are those which, although not now necessarily threatened with extinction, may become so unless their trade is regulated and monitored. The Convention requires documentation by exporting countries, and reexporting countries, to verify that a listed species was legally taken—and that such taking was not detrimental to the survival of the species—before import is allowed into countries party to the Convention.

The rapid decline of the elephant in many African nations indicates Convention controls are not being applied. In addition, because of inadequate documentation, reexporting countries may not be thoroughly reviewing whether ivory was imported in accordance with Convention provisions.

Rationale for Rulemaking

In proposing the African elephant for Threatened status, the Service has considered that the United States is a major importer of ivory products that come from this species—legally and illegally. Over the past five years, ivory imports have risen steadily and amounted to an estimated \$4.7 million in 1977, approximately one-quarter of the world market.

Under the provisions of the Endangered Species Act of 1973, commercial trade in Threatened species is prohibited unless specific exemptions are allowed. The objective of the proposed rulemaking is to discourage ivory poaching for the U.S. market and to conserve the species. The Service recognizes, however, that in some African nations the elephant is adequately protected and stable populations are being maintained, allowing for a legal harvest of ivory that could be entered into commerce to the benefit of those nations' economies.

The Service perceives that, with better management and protection, the severe decline in elephant populations as a result of poaching could be arrested in other countries and the species restored as a valuable economic resource. The Service also is aware that biological data on the elephant's status are incomplete in some countries and that the extent and nature of illegal trade in ivory are largely unknown.

Options for Control

In its proposal, the Service is soliciting comment on a number of options to regulate the import, export, and interstate commerce in African ivory.

The options have been developed in view of the complex considerations involved in the conservation of this species and are as follows:

1. No commerce, except as may be provided under special permit.

2. Commerce only in products from nations that have ratified the Convention on International Trade in Endangered Species of Wild Fauna and Flora, and that have exported such products under export permits as provided by the Convention, thereby guaranteeing that such export is not detrimental to elephant populations.

3. Commerce only in products from nations that could provide satisfactory certification and evidence that they have adequate conservation programs for the elephant.

4. Commerce only in products from nations that can demonstrate that the products originated in a nation meeting the criteria for options 2 or 3 above.

One version of these options will be promulgated as part of the "special rules" which would accompany a final Threatened listing for the elephant. The Service wishes to receive a broad range of comments on the probable effects of the various options in order to arrive at the optimum method—or methods—of control. These comments should be submitted to the Service no later than March 20, 1978.

International Cooperation

To further cooperative conservation measures internationally, the Service will consult with all involved foreign governments, as required by the act, before issuing a final rulemaking.

In addition, the Service plans to fund a study of the ivory trade. This study is intended to fill in missing information about how trade in ivory is conducted—sources of raw materials, manufacture, and distribution of the raw materials as well as finished products. A number of other research projects are in progress by conservation organizations to develop additional knowledge to help protect the elephant.

Reference Note

All Service notices and proposed and final rulemakings are published in the *Federal Register* in full detail. The parenthetical references given in the BULLETIN—e.g., (F.R. 1/17/78)—identify the month, day, and year on which the relevant notice or rulemaking was published in the *Federal Register*.

Pending Rulemakings

The Service expects to issue rulemakings and notices of review on the subjects listed below during the next 90 days. The status or action being considered for each final and proposed rulemaking is given in parentheses.

The decision on each final rulemaking will depend upon completion of the analysis of comments received and/or new data made available, with the understanding that such analysis may result in modification of the content or timing of the original proposal, or the rendering of a negative decision.

Pending Final Rulemakings

- Bald eagle (modification of status in Lower 48 States)
- Leopard darter (T, C.H.)
- 27 snails (E, T)
- 6 butterflies (C.H.)
- Contra Costa wallflower and Antioch Dunes evening primrose (C.H.)
- 13 plants (E, T)
- Houston toad (C.H.)
- Grizzly bear (C.H.)
- Gray wolf (reclassification to T in Minn., C.H.)
- 15 crustaceans (E, T)
- Whooping crane (C.H.)
- Black toad (T, C.H.)
- Mona boa (T, C.H.)
- Mona ground iguana (T, C.H.)
- Eastern indigo snake (T)
- New Mexican ridge-nosed rattlesnake (E, C.H.)

Pending Proposed Rulemakings

- 10 North American beetles (E, T)
- 2 harvestmen (E, T)
- 3 mussels (C.H.)
- Rocky Mountain peregrine falcon population (C.H.)
- Colorado squawfish (C.H.)
- Virgin River chub (E, C.H.)
- 2 Hawaiian cave invertebrates (E, T)
- Leatherback sea turtle (C.H.)
- 4 Alabama and Georgia fishes (E, C.H.)
- Puerto Rican whip-poor-will (C.H.)
- Laysan duck (C.H.)
- Bonytail chub (E, C.H.)
- Razorback sucker (T, C.H.)

BOX SCORE OF SPECIES LISTINGS

Category	Number of Endangered Species			Number of Threatened Species		
	U.S.	Foreign	Total	U.S.	Foreign	Total
Mammals	36	227	263	2	17	19
Birds	68	144	212	2		2
Reptiles	10	46	56	3		3
Amphibians	5	9	14	2		2
Fishes	30	10	40	9		9
Snails		1	1			
Clams	23	2	25			
Crustaceans						
Insects	6		6	2		2
Plants	4		4			
Total	182	439	621	20	17	37

Number of species currently proposed: 112 animals
1,867 plants (approx.)

Number of Critical Habitats proposed: 43

Number of Critical Habitats listed: 22

Number of Recovery Teams appointed: 59

Number of Recovery Plans approved: 12

Number of Cooperative Agreements signed with States: 21

Listed Species: Update

A comprehensive U.S. List of Endangered and Threatened Wildlife and Plants was last published in the *Federal Register* on July 14, 1977. Since that date, the following species have been added to the official list (E = Endangered; T = Threatened):

- Birds:**
- Shrike, San Clemente
 - loggerhead (E)
 - Sparrow, San Clemente sage (T)
- Reptiles:**
- Anole, giant (E)
 - Lizard, island night (T)
 - Snake, Atlantic saltmarsh (T)

- Amphibians:**
- Treefrog, pinebarrens (E)
 - Coqui, golden (T)
- Fishes:**
- Cavefish, Alabama (T)
 - Chub, slender (T)
 - Chub, spotfin (T)
 - Darter, slackwater (T)
 - Madtom, yellowfin (T)
- Clams:**
- Riffle shell, tan (E)
- Plants:**
- San Clemente broom (E)
 - San Clemente bushmallow (E)
 - San Clemente Island lackspur (E)
 - San Clemente Island Indian paintbrush (E)

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- 2 Hawaiian arthropods (E, T)
- Whooping crane (C.H.—additional areas)
- Illinois mud turtle (E, C.H.)
- Key mud turtle (E, C.H.)
- Plymouth red-bellied turtle (E, C.H.)

- 5 Ash Meadow plants (C.H.)
- 7 California and Oregon freshwater fishes (E, T)
- 23 foreign mammals and 1 bird (E)
- Light-footed clapper rail and yellow-shouldered blackbird (C.H.)

Abbreviations: E=Endangered, T=Threatened, C.H.=Critical Habitat



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